

Elaine McCluskey

From: Elaine McCluskey [mccluskey@fnal.gov]
Sent: Friday, October 15, 2004 1:05 PM
To: Bill Foster; Chuck Federowicz; David Finley; Dixon Bogert; Duane Plant; Ed Crumpley; fgarcia@fnal.gov; Rich Stanek; Shekar Mishra; 'Steve Geer'; Tom Lackowski; Vic Kuchler; Weiren Chou
Subject: Notes from 10/13/04 Linac Proton Driver Meeting - Civil

NEXT MEETING WILL BE 10/20/04 IN confESSional AT 9:30 A.M. BF and WC will not be attending, but interested parties will gather.

Attendees: Bill Foster, Weiren Chou, Fernanda Garcia, Steve Krstulovich, Dixon Bogert, Chuck Federowicz, Tom Lackowski, Elaine McCluskey

Items discussed:

1. Power – Elaine reviewed discussion with Joe Pathiyil about feeding the site.
 - a. Joe had recommended using KRS instead of MSS because of lack of room in vault for additional breakers, lack of available transformers (this is exacerbated by low use of a coveted Pbar transformer)
 - b. Joe had also assumed simultaneous use of Linac/Booster, so that feeders 40 & 41 would have to be reserved for that use. After some discussion, it was concluded that the air line from Frog Farm (Joe says this has 7.5 MVA available) could be used for not only construction power, but also commissioning of the new PD line while the Linac/Booster operated. When PD comes on line, Linac/Booster would not run, so those feeders could be available. *Further discussion with Joe after the meeting lead to these observations:*
 - i. *Linac feeder (40) also supplies house power to Main Control Room and buildings in that area. Question of whether these could be simultaneous*
 - ii. *Booster feeder (41) also is the backup to CUB, which needs to be preserved.*
 - iii. *Joe will look at possibilities for reusing existing routing from MSS.*
 - iv. *May also want separate feed for cryo, since this is "dirty" power, and may want to be isolated on its own feeder. Prior discussions of Joe and John Santic and Tom had concluded that feeders 46A/B which currently serve compressor buildings around the ring should also be able to serve the new cryo facility.*
 - c. BF said that goal is to make 0.5 MW version "as cheap as possible" and that using KRS for the 2 MW machine with its inherent increased cost would be appropriate. Critical are backfeed capabilities for redundancy. Idea was floated for using Frog Farm as backup power – *later discussion with Joe lead to belief that if this was done, the line should be buried, since it's susceptible to lightning strikes.*
1. Dump - reviewed size and layout at injection (MI-10). Conclusion – definitely needs to be outside existing tunnel due to size and other thing that are located in tunnel in this area (DB visited last week). May still need to have angle > 40 mradians. DB needs divergence at dump, then will be able to determine what size pipe will have to go through the wall, and then can better understand angle required. *Later information from Weiren was that divergence is 40 mradians plus/minus 3 mradians.* Still don't know if access to dump will be required.
2. Transport line – Chuck had plotted newest version. Showed pink (new WC layout) versus yellow (Chuck's best fit for civil). Pink is avg 714 ft radius. Conclusion is that linac perhaps should be after first arc inside ring, to lessen construction required and to put in less environmentally sensitive (fewer trees, not real wet) area.

ITEMS FOR NEXT WEEK:

More information about the dump based on new divergence information.
 Possibly more power discussions.

ACTION ITEMS:

Elaine will talk with some more with Joe and others about powering 0.5MW from MSS.
 Elaine will investigate with ESH possible affect on MI/NuMI EA's from upgrade to 2MW machine – meeting scheduled for early next week with ESH.
 Chuck will draw up divergence at dump and revised linac location.

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